

Resources for Mathematics, Statistics and Physics



Where to start

Go to the SOLO homepage at <http://solo.bodleian.ox.ac.uk/> and click on **LibGuides** under **Useful links**.

Click on **Subjects A-Z** and then select Mathematics, Statistics or Physics. A library guide with resources and information specific to your subject will open.

Databases

Click on the **Databases** tab to explore databases and start your search (the Statistics LibGuide has two – Core Statistics and Biostatistics).

Scopus and Web of Science

Web of Science and **Scopus** are very good places to find literature on your subjects. More detailed information on using these databases is provided in separate task sheets.

MathSciNet

MathSciNet is produced by the American Mathematical Society (AMS). The database covers research in mathematics – pure and applied mathematical sciences, and includes Mathematical Reviews (summaries of research findings produced by experts).

Searching MathSciNet for publications:

- Go to SOLO at <http://solo.bodleian.ox.ac.uk/>
- Search for **MathSciNet**, and follow the **Online access** link
- Make sure you are on the **Publications** tab (the default)
- To run a topic search, select **Anywhere** from the drop-down menu next to each search box
- Enter the following search terms in separate search boxes (You can use this search example or use keywords related to your own research topic). Combine search terms using the Boolean operator **AND**:
 - Monte Carlo method* **AND** fluid flow* **AND** simulat*



- The wild card * finds plurals and alternative word endings eg. flow* for flows, flowing, etc
- Use **Time Frame** to limit your search to a specific publication time range
- Click **Search**
- You can sort your results by date, citations, and authors (results can be refined by filters on the left)
- From one of the listed article references, click on each of the **author names** to find more information about their co-authors, previous publications indexed on MathSciNet and main fields of publication - you might find more information and papers relevant for your research

Using classification numbers to find relevant items related to your search

- Run the search example of the previous exercise (keywords Monte Carlo method* AND fluid flow* AND simulat*, Anywhere field)
- Choose an article from the results list. At the end of its reference you'll see an alphanumeric combination (see example in the picture below)

MR3832048 Reviewed Di Staso, G.; Srivastava, S.; Arlemark, E.; Clercx, H. J. H.; Toschi, F. Hybrid lattice Boltzmann-direct simulation Monte Carlo approach for flows in three-dimensional geometries. *Comput. & Fluids* 172 (2018), 492–509. **76P05 (82B40 82B80)** Find it Oxford
[Review PDF](#) | [Clipboard](#) | [Journal](#) | [Article](#) | [1 Citation](#)

- That is the subject classification number assigned to this article according to the **Mathematics Subject Classification** (MSC2010) scheme (Articles have a primary classification for their main topic and a secondary classification (in brackets) if needed, for any other principal topics (more information is available at <https://mathscinet.ams.org/mathscinet/msc/msc2010.html>)
- Click on it to see what the classification for this article is

- Now click on the **paper icon** next to the primary classification number of your article - you'll access the list of all papers for that class and can find here other relevant articles on the topic of your interest
- You can use primary and secondary classification numbers for your next search. To do so:
- Go back to the MathSciNet home page to run a new search.
- Now combine the
Anywhere field - keywords Monte Carlo method* AND fluid flow* AND simulat* with the
MSC Primary field – 76P05
- To find other articles in this class that match your topic search. This will allow you to significantly narrow down your research and get relevant results.

The screenshot shows the MathSciNet search interface with the following search terms and classification numbers:

| Search Terms | Classification Number | Operator |
|-----------------------|-------------------------------------|----------|
| Anywhere | Monte Carlo method* AND fluid flow* | and |
| Anywhere | | and |
| MSC Primary | 76P05 | and |
| MSC Primary/Secondary | | |

Searching MathSciNet for Authors and Journals

- Click on the **Authors** tab on the main page
- Enter the Author Surname, initial* and search
- The **MR Author Profile** will appear. You can view publications, Co-authors and Citations
- Click on the **Journals** tab on the main page to search for journals

For instance, search **Physics of Fluids**. The journal profile page will open where you can see information on the journal, its publications and citation trends through the years, its top authors, and main research areas/classification numbers.

Exporting references from MathSciNet

- Open MathSciNet and run a search
- Select the articles you want to download

- Choose a file type from the Batch download dropdown menu - select **Citation (BibTeX)** for references in BibTeX format
- Click **Retrieve Marked** to display references for the articles you have selected
- Select all references, copy and paste them on a Notepad file
- Save the file in **.bib** format

Organising your references with reference managers

Reference managers help you to organise details of all the papers, books and other documents you collect to support your research. They also simplify adding citations and properly formatted bibliographies to your documents.

- You can import and export your references in .bib format with all reference managers, and organise them in folders, annotate, or share them
- For instructions on using Bibtex with reference management packages check the **Latex and BibTeX** tab on the **Managing your References** LibGuide:
<http://libguides.bodleian.ox.ac.uk/reference-management/>

Useful e-book series

Click on the **Books and e-books** tab on the Mathematics or the Physics Libguides to access useful e-books series. Some of the listed ebook collections are:

- **Lecture Notes in Mathematics** - ebook series on new developments in all areas of mathematics and their applications.
- **Lecture Notes in Physics** - series reporting on development in physics research and teaching. Founded in 1969, online from 2008 to present.
- **O'Reilly (formerly Safari) platform** includes ebooks, programming manuals, and online courses on a variate range of topics in computing, data science, business, etc.
Please note: You will need to register on the website using an .ox.ac.uk email address to access it.
- **Oxford Scholarship Online: Mathematics** - a collection of 144 Oxford University Press mathematics books also accessible individually via SOLO.

Click on some of the collections to explore their contents. You can also access these ebooks series directly from SOLO – just search them by series name. Single ebooks are accessible individually by their title on SOLO.